

Contraception and Conception

The Story of Carl Djerassi

June/20/2013



Photo: Karen Ostertag

Few people can claim to have had a more fundamental impact on women's personal lives, modern family structures and global demographics than chemist and multi-disciplinary thinker **Carl Djerassi**. World-famous for his contribution to the invention of the birth control pill, Djerassi has complemented his numerous scientific achievements with an exceptional dedication to the arts in his later years: as an author, playwright and distinguished art collector.

With his major contribution to the development of the oral contraceptive pill in 1951, Carl Djerassi significantly changed the life of women and the dynamics of relationships. Released at a time of social and political upheaval, the pill empowered women to control contraception, pursue a career and postpone having a child or more children. While there have been other methods of contraception before, the pill was the first one that was fairly reliable and which women could use on their own terms.

Carl Djerassi looks back on quite an eventful life. Born in Vienna in 1923, during the tumultuous period between the world wars, Djerassi had to emigrate to Bulgaria and later to the USA to escape the Nazi regime at age 14. His superb grades at an American school in Sofia allowed him to get a college scholarship without even finishing high school. He graduated as a chemistry major from Kenyon College, Ohio, intending to follow in his parents' footsteps and to become a physician. As he could not afford to study medicine, he accepted a position as junior chemist at pharmaceutical giant Ciba in New Jersey, where he developed one of the first two antihistamines, tripeleennamine, at age 19.

After receiving a research scholarship and earning his PHD in Chemistry in Wisconsin with a focus on steroids, he started to work on the synthesis of cortisone gained from plants in a small team at Syntex in Mexico. Djerassi has called this time "the most productive 2 years" of his life. It was during this period that he achieved his most influential scientific breakthrough. In 1951, he succeeded to synthesize norethisterone, the first artificial progesterone that maintained effective when taken orally. Its natural counterpart is produced by the body to prevent ovulation during pregnancy. While natural progesterone loses its effect when ingested, norethisterone remains biologically active and can be produced in large amounts. Taken up by women's rights activists Margaret Sanger and Katharine McCormick, as well as biologist Gregory Pincus, Djerassi's discovery directly led to the development of the first birth control pill changing the world for women as we knew it.

Djerassi has received over 30 honorary doctorates, he is the only American scientist who has been awarded with both the US National Medal of Science and the National Medal of Technology. However, he is far from resting on his laurels. In the mid-80s he started to write novels and theatre plays coining the genres "science-in-theatre" and "science-in-fiction". Through his storytelling, Djerassi aims to "smuggle" expert knowledge and scientific topics into the public discourse addressing social and cultural ramifications of scientific developments.

In one of his recent plays called "ICSI", for instance, Djerassi has dealt with another cultural shift regarding the separation of sex and reproduction. "For the last 50 years, the leitmotif was contraception. The present 50 years, it's conception," as he pointed out in an interview with the Guardian. More and more women in the western world wait until their mid-30s to become parents. As the likelihood of getting pregnant decreases with age, methods like IVF (in vitro fertilization) and ICSI (intracytoplasmic sperm injection) become more important. Djerassi thinks eventually the pill will get obsolete. Women will be able to freeze their eggs in their twenties, get sterilized to eliminate the need of contraception and withdraw their eggs later when they are ready to have a child. Naturally, the possibilities of these methods come with a new set of ethical questions to be dealt with.

*At **DLDw 13**, Djerassi will present his upcoming autobiography "Der Schattensammler – Die allerletzte Biographie von Carl Djerassi" (Treading on Shadows: The Very Last Autobiography of Carl Djerassi) addressing a multitude of these complex issues in a nutshell.*